

Title (en)

METHOD AND DEVICE FOR ESTIMATING THE TEMPERATURE OF AN AXLE BEARING OF A WHEELSET OF A RAIL VEHICLE

Title (de)

VERFAHREN UND VORRICHTUNG ZUM ABSCHÄTZEN DER TEMPERATUR EINES RADSATZLAGERS EINES RADSATZES EINES SCHIENENFAHRZEUGS

Title (fr)

PROCÉDÉ ET DISPOSITIF PERMETTANT D'ÉVALUER LA TEMPÉRATURE D'UNE BOÎTE D'ESSIEU D'UN ESSIEU DE VÉHICULE FERROVIAIRE

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Application

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Abstract (en)

[origin: WO2011029859A1] The invention relates to a method for estimating the temperature (T B, est) of a wheel bearing (1) of a wheelset of a rail vehicle by means of a calculation model (Tbearingestimator). According to said method, the calculation model (Tbearingestimator) is designed to estimate the temperature of the axle bearing in question, according to the speed (vtrain) and the ambient temperature (Tamb) of the rail vehicle as input variables of the calculation model (T bearing estimator), and the temperature of a component (6) of the wheelset, different from the axle bearing (1) but directly or indirectly connected to the axle bearing in a heat-conducting manner, is measured as the measuring temperature (Tmeas) during operation. The temperature of the component (6) different from the axle bearing (1) is estimated by means of the calculation model (Tbearingestimator) as the estimated temperature (Tmeas,est). In order to improve the accuracy of the calculation model (Tbearingestimator) in terms of the estimation of the temperature (TB,est) of the axle bearing (1), the calculation model (Tbearingestimator) has a corrective element (Kb) that is used to continuously, temporarily or cyclically calibrate or adjust it on the basis of a comparison of the measuring temperature (Tmeas) with the estimated temperature (Tmeas,est).

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